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MINISTRY OF EMPLOYMENT AND THE ECONOMY

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2009 REPORT ON PROMOTION OF THE USE OF BIOFUELS AND OTHER RENEWABLE FUELS FOR TRANSPORT IN FINLAND REQUIRED PURSUANT TO DIRECTIVE 2003/30/EC

## **Introduction**

In accordance with Article 4(1) of the Directive of the European Parliament and of the Council on the promotion of the use of biofuels and other renewable fuels for energy for transport (2003/30/EC), Finland has drawn up the following report on:

- the measures taken to promote the use of biofuels or other renewable fuels to replace diesel or petrol for transport purposes,
- the national resources allocated to the production of biomass for energy uses other than transport, and
- the total sales of transport fuels and the share of biofuels and other renewable fuels placed on the market for the preceding year.

## **1. Measures to promote the use of biofuels or other renewable fuels**

### Obligation to distribute biofuels

The Act on the promotion of the use of biofuels for transport entered into force on 1 January 2008. The Act obliges distributors of transport fuels to supply a minimum percentage of biofuels for transport annually for consumption. In 2008, the minimum share of the total energy content of petrol, diesel oil and biofuels supplied for consumption by transport fuel distributors was 2%. In 2009, the minimum share was 4%.

The Act was amended in 2009, so that the minimum share for 2010 and subsequent years remains at 4% instead of the original 5.75%. The reason for the amendment was that the national regulations concerning the quality of fuels pursuant to the new fuel quality Directive did not enter into force at the beginning of 2010. Consequently, the requirement for a 5.7% share of biofuels was not considered possible. In 2010, however, it is intended to issue a new bill, which will provide for a minimum percentage for 2011 and 2012. For 2011, the requirement will be at least 5.75%.

### Research and development

In spring 2007, Tekes – the technology and innovation development centre – launched BioRefine – New biomass products technology programme. The programme began in 2007 and will run until 2012. The programme's specific objective is to promote the

significant development of second-generation production technologies for biofuels used for transport.

In September 2009, the total volume of business projects launched under the BioRefine programme was EUR 92 million. (Tekes funding EUR 37 million) and the total volume of projects by research establishments was EUR 31 million (Tekes EUR 19 million).

The main biofuel products and technologies being developed under the programme are:

- Synthetic biodiesel from wood/forest residues, gasification
- Synthetic biodiesel from new raw materials, algae, microorganism, other
- Biofuel oil from wood/forest residues, integrated pyrolysis
- Lignocellulosic ethanol, straw, refuse, waste

In close cooperation with the BioRefine programme, a special development programme is being implemented by the Ministry of Employment and the Economy and Tekes, with the emphasis on pilot and demonstration projects for new technologies. Under this programme, new projects amounting to EUR 9 million were launched in 2007. EUR 5 million per year have been allocated to the programme for 2008-2010..

## **2. National resources allocated to the production of biomass for energy uses other than transport**

The use of bioenergy in Finland currently accounts for more than 20% of total energy. The reason for this is the extensive forestry industry, which accounts for around 70% of all bioenergy consumed. The main bioenergy sources are effluents produced by the wood industry, industrial timber residues, such as sawdust and bark, as well as wood chips and recycled fuels. Bioenergy is used for heat and power production for industry and society in general.

The Government's long-term climate and energy strategy, issued to Parliament in November 2008, is based on the assumption that Finland will meet the renewable energy target set in the RES Directive, i.e. increase the share of renewable energy to 38% by 2020. As regards bioenergy, increasing the use of wood-based fuels is estimated in the climate and energy strategy as one of the key resources for increasing the share of renewable energy. In particular, a considerable increase in the use of wood chips is expected. The energy use of energy crops such as reed canary grass and agricultural by-products is also promoted. A further objective of the strategy is to increase the use of recycled fuels as an energy source by at least 150% by 2020. Substantial growth goals have been set for the use not only of solid fuels but also of biogas and liquid biofuels.

The climate and energy strategy also stated that a metering tariff system would be introduced in Finland. A working party was set up to prepare this, which filed its report in November 2009. The working party proposes that Finland should adopt a market-based guaranteed prices regime. The proposals concern electricity generated by wind power or biogas. Under the proposed system, electricity producers would participate in the electricity markets and would be exempted from the electricity price risk almost entirely for the duration of the tariff.

The resources allocated to the promotion of bioenergy are outlined below:

## Research and development

Tekes' funding for renewable energy technology projects rose slightly in 2008 to a total of EUR 33 million. Bioenergy accounted for approximately EUR 22 million of this, slightly less than the previous year. The total funding of energy and climate research rose from 118 million in 2007 to nearly 140 million in 2008.

## Investment aid

The aims of the energy aid granted to companies and organisations by the Ministry of Employment and the Economy were to increase the use of renewable energy sources, promote the use of new efficient energy technology and to reduce the production and use of environmentally harmful energy.

Approximately EUR 29 million was awarded in energy aid in 2008. As in previous years, investment was predominantly in wood-based fuels – chiefly heating plants and wood fuels production projects. Nearly EUR 15 million was invested in the use of wood for energy. Another significant target of aid was biogas investment, for which approximately EUR 7 million was awarded.

In 2009 over EUR 100 million was available in energy aid.

## Aid for logging and chipping of fuel wood

The Ministry of Agriculture and Forestry financially supports the logging and extraction of wood sold for fuel from young forests managed according to the Act on the Financing of Sustainable Forestry. The aid for harvesting fuel wood is €7 per solid cubic metre. Chipping of fuel wood is also eligible for EUR 1.7 per cubic metre. In 2008, a total of EUR 6.5 million was available for the logging and chipping of fuel wood.

### **3. Total sales of transport fuel and the share of biofuels, pure or blended, and other renewable fuels placed on the market**

In 2008, the use of biofuels for transport rose from 0.076% in the previous year to 3.569%. The breakdown for the main biofuels is as follows:

Bioethanol 1.374 PJ

Ethers (ETBE, TAEE, bio source) 1.691PJ

Biodiesel (FAME + hydrotreated vegetable oil) 0.479PJ

The table below shows the consumption of road traffic fuels in 2008 and the share of biofuels.

	Total road traffic fuels PJ	Petrol PJ	Diesel PJ	Biofuels	
				PJ	%
2008	168.2	71.4	94.3	3.569	2.11

Source: Customs